

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
8 July 2004 (08.07.2004)

PCT

(10) International Publication Number
WO 2004/057817 A2

(51) International Patent Classification⁷: **H04L 12/64**

(21) International Application Number:
PCT/IB2003/005345

(22) International Filing Date:
20 November 2003 (20.11.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
02080374.8 19 December 2002 (19.12.2002) EP

(71) Applicant (*for all designated States except US*): KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): MELPIGNANO,

Diego [IT/IT]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). SIORPAES, David [IT/IT]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

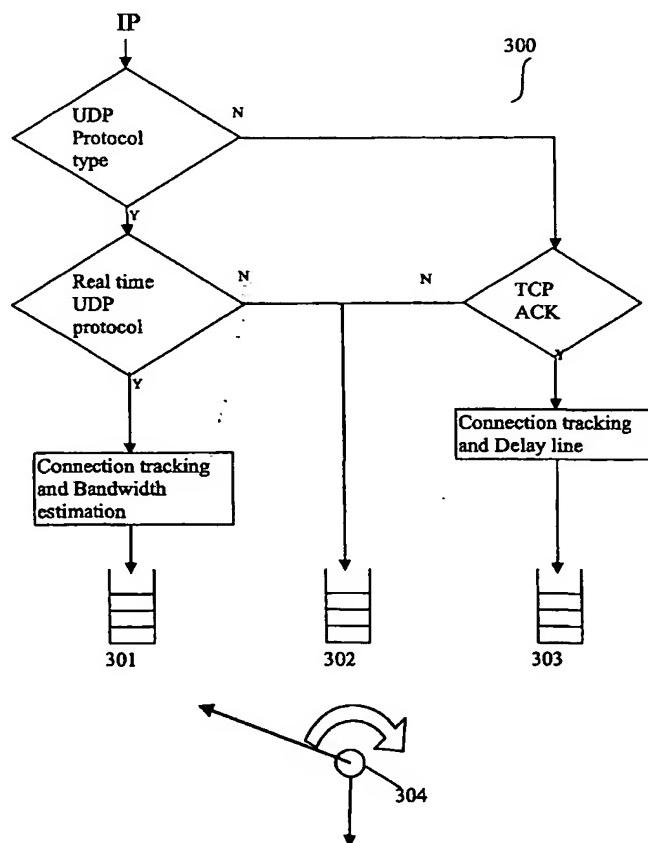
(74) Agent: GROENENDAAL, Antonius, W., M.; Philips Intellectual Property & Standards, Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,

[Continued on next page]

(54) Title: PROTECTING REAL-TIME DATA IN WIRELESS NETWORKS



(57) Abstract: The invention provides a traffic shaper module allocates more bandwidth to real-time data in wireless TCP/IP networks where accessible bandwidth is limited. This is particularly relevant for IEEE 802.11b networks. For downstream data, the traffic shaper module can be set to control the transmission to all clients and thereby give priority to the port carrying real-time data. For the upstream case, data transmission from all kinds of standard devices is to be reduced or delayed. Hence, the data transmissions from other clients have to be controlled remotely from the access point. By delaying or discarding packets, such as TCP acknowledgements, to other clients, the traffic shaper module artificially increases their Round Trip Time (RTT). The protocol at these clients responds to the increased RTT by transmitting data at a lower rate, thereby leaving more bandwidth for the real-time data port.



ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

- *without international search report and to be republished upon receipt of that report*